AMENDMENTS TO THE CLAIMS

Claim 1. (Currently Amended) A method for receiving wireless signals, the method comprising the steps of:

calculating an amount of time for a signal to travel to a receiver from an antenna in an antenna system;

providing a rake receiver having a plurality of fingers, the rake receiver containing a finger for each antenna in an antenna system;

receiving the signal from each antenna at the receiver;

implementing a varying delay on the signal corresponding to the amount of time for the signal to travel to the receiver, the delay varying over a first predetermined range of values;

measuring a signal power level of the signal;

resetting the delay to a value corresponding to the highest measured signal power level of the signal for further operation of the receiver; and

resolving the signal at the receiver.

Claim 2. (Original) The method of Claim 1, wherein the delay is an adjustable delay.

Claim 3. (Original) The method of Claim 1, wherein the delay is implemented at the receiver on the plurality of fingers.

Claim 4. (Original) The method of Claim 1, wherein the delay is implemented at the antenna.

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Claim 5. (Original) The method of Claim 1, wherein the step of resolving the signal at the receiver includes a combiner summing outputs of the plurality of fingers to recover a transmitted signal.

Claim 6. (Currently Amended) A rake receiver circuit for receiving multi-path signals, the rake receiver comprising:

a first rake finger circuit having a first variable delay element, where the first variable delay element is configured to receive a first delay control signal, the first delay control signal value being selected to align a first delay introduced by the first variable delay element with a first multi-path signal to produce a first correlated data signal;

a second rake finger circuit having a second variable delay element, where the second variable delay element is configured to receive a second delay control signal, the second delay control signal value being selected to align a second delay introduced by the second variable delay element with a second multi-path signal to produce a second correlated data signal; and

a summing circuit for summing the first and second correlated signals to produce a combined data signal, wherein the first delay and the second delay are selected so that the first correlated data signal and the second correlated data signal arrive at the summing circuit at substantially the same time.

Claim 7. (Original) The rake receiver circuit of Claim 6, where the receiver circuit further includes a scan control circuit configured to receive the first and second correlated signals and, responsive thereto, generate the first and second delay control signals.

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Claim 8. (Original) The rake receiver circuit of Claim 7, where the scan control circuit is configured to generate the first delay control signal by varying the first delay control signal over a first predetermined range of values, measuring a signal power level of the first correlated data signal to determine a value of the first delay control signal corresponding to a highest measured signal power level of the first correlated data signal, and setting the first delay control signal to the value of the first delay control signal corresponding to the highest measured signal power level of the first correlated data signal for operation, and where the scan control circuit is further configured to generate the second delay control signal by varying the second delay control signal over a second predetermined range of values, measuring a signal power level of the second correlated data signal to determine a value of the second delay control signal corresponding to a highest measured signal power level of the second correlated data signal, and setting the second delay control signal to the value of the second delay control signal corresponding to the highest measured signal power level of the second correlated data signal for operation.

Claim 9. (Original) The rake receiver of Claim 8, where the scan control circuit is further configured to generate the first and second delay control signals responsive to a scan control signal.

Claim 10. (Currently Amended) A system for transmitting multi-path signals to a rake receiver, the system comprising:

a plurality of antennae, where each antenna is configured to transmit a multi-path signal; and

a plurality of variable delay elements, each variable delay element having a delay, each variable delay element coupled to a corresponding one of the plurality of antennae, where the delay of each variable delay element is selected such that the multi-path signal of corresponding antenna is aligned with one finger of the rake receiver,

wherein the multi-path signal received by the rake receiver is delayed to maximize an input power of the multi-path signal at the rake receiver.

Claim 11. (Original) The system of Claim 10, where the delay of each variable delay element is determined based on a distance from the corresponding antenna to the rake receiver.

Claim 12. (Original) The system of Claim 11, where the delay of each variable delay element is determined based on a control signal from the rake receiver.

Claim 13. (Currently Amended) A method for receiving a plurality of multi-path signals in a rake receiver, the method comprising the steps of:

providing a first variable delay for a first finger of the rake receiver;

~~selecting a delay of the first variable delay to correspond to a first one of the plurality of multi-path signals;~~

measuring an output power level of the first finger of the rake receiver to identify a high output power level of the first finger;

setting a delay of the first variable delay to correspond to the high output power level of the first finger, the delay corresponding to a first one of the plurality of multi-path signals;

providing a second variable delay for a second finger of the rake receiver;

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selecting a delay of the second variable delay to correspond to a second one of the plurality of multi-path signals; and

summing outputs of the first and second fingers of the rake receiver.

Claim 14. (Currently Amended) The method of Claim 13, where setting the delay of the first variable delay further comprises:

~~the step of~~ selecting the ~~a~~ delay of the first variable delay to correspond to the ~~a~~ first one of the plurality of multi-path signals ~~includes~~ by calculating a distance from a first antenna corresponding to the first one of the plurality of multi-path signals to determine the delay of the first variable delay.~~; and~~

~~the step of selecting a delay of the second variable delay to correspond to a second one of the plurality of multi-path signals includes calculating a distance from a second antenna corresponding to the second one of the plurality of multi-path signals to determine the delay of the second variable delay.~~

Claim 15. (Currently Amended) The method of Claim 13, where:

~~the step of selecting a delay of the first variable delay to correspond to a first one of the plurality of multi-path signals includes scanning over a range of the first variable delay, measuring an output power level of the first finger of the rake receiver to identify a high output power level of the first finger, and setting the delay of the first variable delay element to correspond to the high output power level of the first finger; and~~

the step of selecting a delay of the second variable delay to correspond to a second one of the plurality of multi-path signals includes scanning over a range of the second variable delay,

measuring an output power level of the second finger of the rake receiver to identify a high output power level of the second finger, and setting the delay of the second variable delay element to correspond to the high output power level of the second finger.

Claim 16. (Currently Amended) The method of Claim 13, where the method includes the step of measuring the multi-path signals received at the rake receiver to identify the first and second ones of the multi-path signals and the method further comprising:

~~the step of selecting a delay of the first variable delay to correspond to a first one of the plurality of multi-path signals includes~~ adjusting the delay of the first variable delay ~~element~~ based on a measured delay of the first one of the multi-path signals; and

the step of selecting a delay of the second variable delay to correspond to a second one of the plurality of multi-path signals includes adjusting the delay of the second variable delay element based on a measured delay of the second one of the multi-path signals.

Claim 17. (New) The method of Claim 13, where:

the step of selecting a delay of the second variable delay to correspond to a second one of the plurality of multi-path signals includes calculating a distance from a second antenna corresponding to the second one of the plurality of multi-path signals to determine the delay of the second variable delay.

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